To any of our SUBSCRIBERS *who are in possession of copies of Nos.* 3, 4, *and* 8, *in an unsoiled state, and who do not require them for binding up, we shall be happy to return the full sum of* THREEPENCE *in exchange for such Nos., they being now entirely out of print.*

THE BUILDER,

NO. XXII.

SATURDAY, AUGUST 26, 1843.

ON THE RECENT DESTRUCTIVE FIRES IN LONDON.

LAST Tuesday evening, we were ruminating on the account of fires that had occurred in this metropolis since the day of our last publication, and we reckoned up the alarming number of TEN! with a total of some hundred thousand pounds' worth of property destroyed, not to dwell on the fearful loss of life by the explosion. We were in too grave a mood, although our gravity would hardly have been compromised by the bitter humour of a jest of such a cast; but we had no heart even for such a jest as to direct that a "head line" should be set up in THE BUILDER, dating from the publication of No. 27, wherein we ventured to express our fears, our surmises, suggestions, warnings, and we may almost add *predictions*—and that that "head line" should be "LONDON FIRE-PREVENTION FUND"—*payments made to credit of* "LONDON FIRE-CURE FUND"—and so to register the thousands and fifty thousands of pounds that each week pass in fearful rapidity from one column to the other, and pass, be it observed, from a bank or stock each day growing less, into a widening, deepening gulph of absolute loss. Yes, ten fires we had reckoned up, and closed the heart-sickening account with fervent hope that a respite would ensue for at least a week or two, premising to enter into our calculations deliberately as to the furtherance of our aforesaid recommendations, when, lo! on Wednesday morning, we are disturbed from our propriety by the rumour of Fire No. 11, in the short time from the Saturday previous, and we were thus impelled to take up our pen again.

We had but a few days before passed through hands the amended Building Act Bill, and thanked the fates that the Parliamentary session was so far advanced as to give assurance that it must lie over to a period that would admit of incorporating with it an enlarged measure of fire-preventive arrangements or provisoes. We had received communications anent our plan of an aqueduct, and for fire-proof buildings, &c. We had heard comments on the suspected apathy of the classes we had addressed, and had been told by one prophetic voice, that nothing but the actual setting in of the too probable SECOND FIRE would rouse the London public to a sense of the common danger. We had heard these, but not a word of objection to our plans; one class of objectors being silenced as to the practicability, and shamed into its admission by what we had said of the doings at New York; the other class, as to the possibility of a "second fire," by what we had said of Hamburgh. So far the way seemed promising and clear, but we did not think of so soon and in so startling a manner being impelled to take up the question again. Here, however, it is, and henceforth it must be continued with some degree of pertinacity; it must be bawled into the ears of the sleepers, and hammered into the comprehension of the dullards; they must know, and all London must know, and it shall not be our fault if they do not know, that we are on the eve of a SECOND FIRE, that preventive measures are indispensable, and are our only reasonable human chance of averting it.

We shall not waste breath to insist again on the practicability of the proposal we advanced in Number 27. The Croton aqueduct is our short answer to all disputants. We shall not waste breath to insist on the possibility of a second general conflagration—*Hamburgh and these "portent fires,"* is all our response in that respect; and, if it were a question of superseding half-a-dozen stage-coaches and as many carriers' waggons by a railway and locomotive appliances, we should have no trouble in shewing that a turnpike road was an unworthy retainer of an almost obsolete system of goods and passenger transit, and that two or three millions would be well expended on an iron road and its correlatives; but although our first answers are not to be gainsaid, and although our task in demonstrating this latter position is so comparatively easy, yet, with the light before us and the fire behind us, and a superabundance of means and energies at hand, as a comparatively insignificant case has proved, —with all this, how hard, how difficult, to arouse the people—the fire offices for the security of their funds—the water companies for the security of their trusts and investments,—and the general public for the security of life and common property! Aroused, however, they shall and must be, or it shall go hard if we thunder not in the ears of some, startling and unpleasant truths, and convert the most stolid and stupid of listeners into the nervously sensitive—their fears shall be worked upon, if their common sense be so inapproachable—their apprehensions of pressing danger shall be aroused, if their sense of duty be insufficient to prompt them to action.

But it was always so. Stage-coach proprietors and turnpike trustees slept and mocked during the advent of the railway visitation, and they have been well-nigh overwhelmed as well as overtaken, and so it will be with interests now in jeopardy. Impending by a thread, by the hair of destiny, is that sword which an extra breath, a mere breath of the raging lungs of fire, may cause to fall upon this city for its devastation and destruction.

£58,500 is the amount of insurance in the several offices involved in the destruction of the premises at Topping's Wharf, and we suppose we may safely calculate on £100,000 as being the least sum which this week's burnings will have swallowed up in London alone. One hundred thousand pounds! that would have given comfort and employment to numerous artificers, and spared the irreparable losses, besides guaranteeing ten and a hundred times the security for the future.

Our hand is to this subject now—it is not to be exhausted in one or two essays—and we fear, as we feared before, that our justification will be found in the adverse turn of events. Fire upon fire and loss upon loss will preach their stern monitions without relent or following remorse. Our voice is that of the look-out-watch, and may not be disregarded. A wise people will pay heed to it—let fools contemn or esteem our sayings folly.

PRINCE ALBERT has received as a present twelve statuettes in metal, representing the emperors of the house of Bavaria, executed by Schwanthaler, of colossal size, in the throne-room at Munich. In order that such artists as might be anxious to compete for the execution of sculpture in the House of Lords should see in what way Schwanthaler had treated similar subjects, he sent them to Gwydir House for their inspection. It was kindly and considerately done. We have reason to rejoice indeed that the prince feels so personally interested in the advancement and prosperity of British art.

THIRTEENTH MEETING OF THE BRITISH ASSOCIATION—1843.

THE proceedings of this learned body commenced on Wednesday evening, the 16th inst. The sectional meetings have not, generally speaking, been well attended; the subjects discussed have not been entirely popular—and the technical dress they are paraded in does not add to their attraction. The ordinaries, &c., are more gaily frequented, and the "soirées" promise to be thronged.

The Marquis of Northampton presided in the place of Lord Francis Egerton, who was prevented from attending, and handed over the presidency to the Earl of Rosse, a nobleman distinguished for his success in astronomical pursuits. The section of mechanical science is thus constituted:—President—Professor John Nacneil. Vice-Presidents—John Taylor, Esq., F.R.S.; F. G. Bargin, Esq.; Sir T. Deane. Secretaries—James Thompson, Esq., C.E.; — Bakewell, Esq. Committee—Isaac Hawkins, Esq.; Charles Vignolles, Esq.; Archdeacon Kyle; Robert Mallett, Esq.

It met for the first time on Thursday week, when Mr. Russell delivered a lecture on the application of some laws of sound on the construction of buildings. He said what he was going to read was a practical subject. It may be known, perhaps, to some members of that section that a committee was appointed to investigate the phenomenon of the laws that communicate motion to water waves; there, many difficulties were got rid of with regard to the undulation of sound in the air, and the laws of sound were satisfactorily explained by the illustration of the causes of the motion of water waves. In consequence, there were constructed buildings in a most perfect manner for hearing. He would not have brought forward his paper on the subject, but that his views were successfully applied, and houses built on his principle capable of containing 4,000 persons. There were several of the same kind in Scotland; and having perfectly succeeded, he felt himself warranted in laying it before the Association, not as an idle speculation, but as a practical result. Some of the laws of sound were not known till very recently—still a great many of them were known always. He would at once proceed to explain a plan of construction by which 20,000 persons can be accommodated in a single building, if necessary, in such a manner that each individual should hear with the greatest ease the voice of a single speaker. It was well known that sound proceeds in a straight line, not round angles. The first element of the construction was that all the heads of the audience should form a certain curve, the focus of which was the head of the speaker, so that the head of each auditor should not interfere with another, and that each should imagine himself in as good a position as possible for both hearing and seeing the speaker. He (Mr. Russell) found by experiment, that a person speaking in a moderate tone of voice in the open air, could be heard at the distance of 200 feet. That distance in a building would accommodate 15,000 persons. Such buildings had not as yet been made to contain more than 4,000 persons, and they were very successful. He proceeded then to explain the geometrical construction of the curve, which was almost semicircular, and from which it was clearly evident that the undulation of sound from the mouth of the speaker reached the auditor in a direct line, and without the slightest interruption. He had published a paper on it some time ago, which had not been attended to, until a young architect adopted his mode of construction and built twenty or thirty houses of the kind. After some further observations, he remarked that speakers should always adapt the tone of his voice to the key-note of the room he was about to speak in, which could be easily done by a tuning fork. For if he tried to speak in any other note he would create inharmonious sounds, and render his voice very indistinct. If he took a room 32 feet long, its key-note would be C, the same as on an organ pipe of the same length; if 25½ feet, the key-note would be E, and so on, and the speaker should pitch his voice to a tone most suitable to the room, and thereby he would speak with the greatest ease. Rooms ought not to be constructed in transverse parallelograms of a different size, for then the speaker could not possibly suit his voice to both, but would create

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